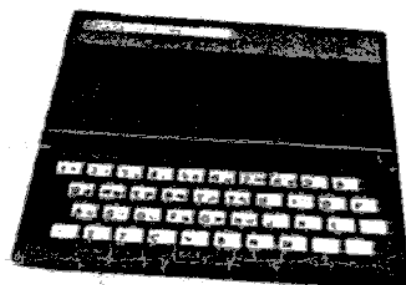
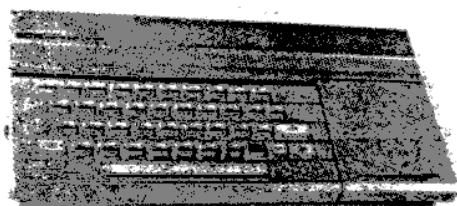


# LISTing Newsletter

April 1994

Newsletter of the Long Island  
Sinclair/Timex Users Group

Next Meeting  
April 10



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### *Listing Policy*

*Annual Dues \$16.00*

One "sample" copy sent upon receipt of Business size SASE.  
Copies provided on **EXCHANGE BASIS** with other bona fide user groups. LISTing is published monthly except July and August by LIST (Long Island Sinclair Timex) Group, a not for profit user group.

We are always looking for articles, programs, reviews etc. to keep our members informed and entertained. You maintain full credit and copyright.

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LIST disclaims any responsibility for any damage you may do to your computer as a result of reading any articles in LISTing.

\*\*\*\*\*  
LIST OFFICERS

\*\*\*\*\*  
PRES. HARVEY RAIT  
U.P. BOB GILDER  
TRES. ROBERT MALLOY  
COR.SEC. JOHN PAZMINO  
EDITOR. FRED STERN  
LIBR. TOM SKAPINSKI  
\*\*\*\*\*

PLEASE SEND INQUIRIES TO:  
LIST  
MR. HARVEY RAIT  
5 PERI LANE  
VALLEY STREAM, N.Y. 11581

PLEASE SEND SUBMISSIONS TO:  
LISTING  
MR. FREDERIC STERN  
P.O. BOX 264  
HOLBROOK, N.Y. 11741  
\*\*\*\*\*

COMING EVENTS:  
\*\*\*\*\*  
APR. 10, 1994 LIST MEETING.

MAY. 14, 1994 NEWPORT 0L SHOW

MAY. 15, 1994 LIST MEETING.

\*\*\*\*\*  
\*\*SPECIAL NOTICE\*\*  
\*\*\*\*\*

THE NEXT MEETING WILL BE HELD AT  
THE ICE CREAM DISPENSARY  
(HARVEY'S STORE)  
334 DOGWOOD AVENUE  
FRANKLIN SQUARE, N.Y.  
TEL: 516-486-1090

DIRECTIONS: SOUTHERN STATE PKWY  
TO EXIT 17 NORTH (HEMPSTEAD AVE)  
GO TO FIRST TRAFFIC LIGHT,  
LEFT TURN ON TO CORNWALL,  
NEXT TRAFFIC LIGHT, BEAR RIGHT  
ON TO DOGWOOD AVENUE. GO 1 MILE  
TO THE ICE CREAM DISPENSARY, IN  
A SMALL SHOPPING CENTER ON THE  
LEFT SIDE OF THE ROAD.

MEETING MINUTES  
\*\*\*\*\*  
REPORTED BY: FRED STERN  
MAR. 13, 1994

\*\*\*\*\*  
THE MEETING WAS CALLED TO ORDER  
BY HARVEY AT 2:00PM

IN THE MAIL WE RECEIVED 3  
CORRESPONDENCES, AND 1 NEWS-  
LETTER EXCHANGE.

WHEN YOU SEND IN YOUR RENEWAL,  
PLEASE LET US KNOW WHAT SYSTEM  
YOU ARE USING. IE, TS1000, 0L  
TS2068, ETC...

BOB GILDER ADVISED US THAT HE  
HAS MADE HIS RESERVATIONS AT  
NEWPORT R.I. FOR THE 0L SHOW.  
KEN LANG ALSO INFORMED US THAT  
HE PLANNED TO ATTEND.

FRED TOLD HOW HE AND DONALD  
LAMBERT OF ZXIR OLIVE ALIVE ARE  
EXCHANGING BACK ISSUES OF LIST-  
ING AND OTHER NEWSLETTERS.  
HOPEFULLY, BOTH LIST AND ZXIR  
OLIVE CAN ESTABLISH COMPLETE  
SETS OF THE OLD NEWSLETTERS FOR  
HELPFUL REFERENCE TO BE USED BY  
THE TIMEX/SINCLAIR COMMUNITY.

EXTRA - READ ALL ABOUT IT.  
\*\*\*\*\* \* \*\*\*\* \*\* \*\*\*\*\* \*\*

FRED INFORMED US THAT HE RECEIV-  
ED A COPY OF A MAGAZINE CALLED  
THE COMPUTER JOURNAL.  
IN IT WAS AN EXCELLENT ARTICLE  
ABOUT THE ZX-81 BY MR. BILL  
KIBLER.

THE MAGAZINE IS DEDICATED, AND  
PROVIDES SUPPORT TO THE OLDER  
CLASSIC COMPUTER SYSTEMS LIKE  
OUR BELOVED SINCLAIRS AND TIMEX.  
IT TELLS COMPUTER HISTORY,  
EXPLAINS DIFFERENCES BETWEEN  
SYSTEMS, AND HAS A GREAT CIRCUIT  
SECTION FOR US HACKERS.  
SUBSCRIPTION RATE IS \$24.00 FOR  
ONE YEAR (6 ISSUES) OR \$44.00  
FOR TWO YEARS (12 ISSUES).  
THE COMPUTER JOURNAL  
P.O. BOX 538  
LINCOLN CA. 95648.

A VERY SPECIAL THANK YOU MUST  
GO TO LONG TIME MEMBER AND  
FRIEND, MR. STONEY MCMURRAY FOR  
TURNING ME ON TO THIS GEM OF A  
MAGAZINE.

THE BALANCE OF THE MEETING WAS  
A TECHNICAL ROUNDTABLE ABOUT THE  
AERCO DISK DRIVE SYSTEM.

THE MEETING ENDED AT 3:30 PM.

CLASSIFIEDS

\*\*\*\*\*  
THIS CLASSIFIED SECTION IS  
AVAILABLE TO ALL LIST MEMBERS  
FREE OF CHARGE.  
THE ONLY RESTRICTION IS THAT  
IT IS TO BE USED ONLY FOR THE  
SEEKING, SELLING OR SWAPPING  
OF SINCLAIR, TIMEX OR MICROACE  
COMPUTER EQUIPMENT, PERIPHERALS  
AND SOFTWARE.  
LISTING, LIST, AND ITS OFFICERS  
DO NOT ENDORSE, WARRANTY, OR  
GUARANTEE ANY OF THE ITEMS  
LISTED IN THIS CLASSIFIED  
SECTION

\*\*\*\*\*

THE FOLLOWING PUBLICATIONS ARE  
AVAILABLE ONLY THROUGH LIST:

ZX-81/TS1000 TECHNICAL TIDBITS  
TECHNICAL TIDBITS PART II  
SAVINGS AND LOAD OF THE TIMEX  
COMPUTER  
\$4.00 EACH.

FOR SALE: TIMEX PRINTER PAPER,  
3 ROLLS - \$5.00+ POSTAGE.  
CONTACT: FRED STERN 516-737-0963  
EVENINGS AND WEEKENDS.

I AM LOOKING FOR AN AERCO DISK  
DRIVE INTERFACE FOR THE TS1000.  
I WILL CONSIDER A PURCHASE  
EITHER WITH OR WITHOUT DRIVES.  
I WILL EVEN CONSIDER A U-REPAIR.  
FRED STERN 516-737-0963. EVEN-  
INGS AND WEEKENDS.

FOR SALE: COMMODORE C-64 COM-  
PUTER, 2 DISK DRIVES, OKIDATA  
COLOR PRINTER, GAMES. ASKING  
\$150.00. CALL MR. MARCELLO  
GALLUZZO, 516-763-2650 EVENINGS.

\*\*\*\*\*  
CONTINUE ON PAGE. 04

## QL CORNER

January 12th 1994 was the 10th anniversary of the launch of the QL and thanks to the enthusiasm of the many users of the QL, we shall see many more years of prosperity and development within the QL environment. On the QL market, there are many new software titles appearing; new hardware such as the Super Gold Card, hard disk interfaces, mouse drivers, an SCSI interface and who knows what else will appear in the future.

QUANTA is celebrating this anniversary with a dinner on Saturday, April 23rd, as part of the Newcastle Workshop. Any member of QUANTA can attend and a charge of £10 per head in advance is required. Additional information appears in volume 11 issue 1 QUANTA magazine.

There has been a change for the location of the Newport, RI QL show on May 14th. The show will be held at the Howard Johnson Motor Lodge in Newport. I don't have the complete address at this time, however, I will provide you with the necessary information plus a detailed map of the location (provided by LIST member Joe LaPunzina) in next months LISTing.

I made a reservation at Motel 6 in Newport - a single room goes for \$33.99. Their telephone number is 401-848-0600. They will keep the light on for you!

I just received the latest issue of QL World magazine where they state in the "Editor's Notebook", page 9, that Miracle Systems Ltd., will demo in Newport, a SCSI card for the QL. I believe that a SCSI interface can operate a CD-ROM drive, and probably it will have provisions for a VGA or Super VGA monitor. This will be the first demo for this interface!

On the inside front cover of QL World, Digital Precision, is advertising Miracle's new Super Gold Card and displays a chart comparing the various features of the Super Gold Card to a bare QL, a Trump Card, and a Gold Card. Below are some of the comparisons:

System Features	Bare QL	Trump Card	Gold Card	Super Gold Card
Speed	1x	1.8x	7x	25x!
CPU	68008	68008	68000	68020
Clock Frequency	7.5MHz	7.5MHz	16MHz	24MHz
Bus Width	8 bit	8 bit	16 bit	32 bit
RAM fitted	128Kb	896Kb	1,920Kb	3,968Kb
Ram access speed	Slow	OK	Fast	Twice Fast
PCB population	V.High	High	V.Low	V.Low
Physical dimensions	Monolith	Full-size	Half-size	Half-size
Lock-up frequency	Quich!	Occasional	V. Rare	Won't
Battery B/U clock	No	No	Yes	Yes
Clock Protection level	N/A	N/A	Modest	High
Toolkit II plus manual	No	Yes	Yes	Enlarged
Sub-Directory support	No	No	Yes	Yes
Parallel/Centronics Port	No	No	No	Yes
Spooler/Screeendump/Ramdisk	No	Yes	Yes	Yes
Speedup Switch (Screen#2)	No	No	No	Yes
Future Hi-Res Graphics	No	No	No	Planned
Disk Drives Supported	N/A	SD/DD	SD/DD/HD/ED	SS/DD/HD/ED
Max No: of drives	0	2	3	4
Max Sectors/disk	N/A	1,440	6,400	6,400
Max disk transfer rate	N/A	30Kb/sec	120Kb/sec	120Kb/sec
Peripheral card tolerance	OK	No	No	OK
SCSI-2 compatibility to-be	No	No	No	Yes
Miracle/DP Warranty	No	No	2 years	2 years
DIY/Kit Incorporability	Yes	No	No	Yes
Overall Rating by DP	2%	10%	30%	110%

Digital Precision (DP) is selling the Super Gold Card at £375 plus a 20% no-limit software discount voucher and a free dust cover plus a free mystery DP program. Trade in from a Gold Card to a Super Gold Card will allow £125 off the above price.

If you are interested in purchasing or trading up to a Super Gold Card, Miracle will be selling them at the Newport show. If you would like to purchase a Super Gold Card from DP, they are at the following location: Digital Precision Ltd; 222 The Avenue, London E4 9SE UK - Telephone: 44 81-527-5493.

See you next month, Bob Gilder

#### A FINAL WORD

\*\*\*\*\*  
MY NAME IS FRED STERN AND I AM  
THE EDITOR OF THIS EDITION OF  
LISTING.

ONCE AGAIN I WANT TO THANK THE  
MANY READERS WHO SENT ME DOCU-  
MENTATION WHICH I NEEDED.  
I HAVE BEEN RUNNING BEHIND  
SCHEDULE, BUT HOPE TO SEND  
DOCUMENTS AND PROGRAMS WHICH I  
PROMISED SOON.

THANK YOU TO TOM SKAPINSKI, AND  
BOB GILDER FOR THERE HELP AND  
CONTRIBUTIONS TO THIS ISSUE.

A VERY SPECIAL THANK YOU TO  
HARVEY FOR HIS HOSPITALITY, AND  
THE USE OF HIS STORE FOR OUR  
MEETING. ALSO TO MIKEY FOR HIS  
CONTRIBUTIONS.

SEE YOU ALL AT THE NEXT MEETING.

APRIL 1994

SU MO TU WE TH FR SA

					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

LIST MEETING 10TH

**T**he Bulletin Boards and User Groups listings are monthly features of *Computer Shopper* in which you can list your BBS or User Group at no charge. All listings are arranged alphabetically, first by state, then by area code. While all BBS numbers are modem numbers, voice numbers are provided whenever possible for User Groups.

**Submission Policy:** Only BBSs operating 24 hours a day, 7 days a week (except for maintenance) supporting computer-related topics, and User Groups supporting computer software and hardware users will be included in either list. If you would like to have your BBS or User Group included in the list, please submit all entries via modem to (913) 478-3088, 8N1 (2,400 bps).

Be sure to fill out all the information as complete-

ly as possible; save your information as well. (Online help is available.)

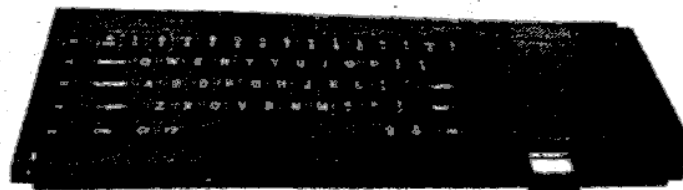
To remain in the Bulletin Boards or User Groups listings, you must call the system at least every three months (every two months is recommended). In future calls, you have the option to review your current listing and either update it or confirm the information on the system. All listings containing inaccurate or unverifiable information will be deleted from the listing immediately.

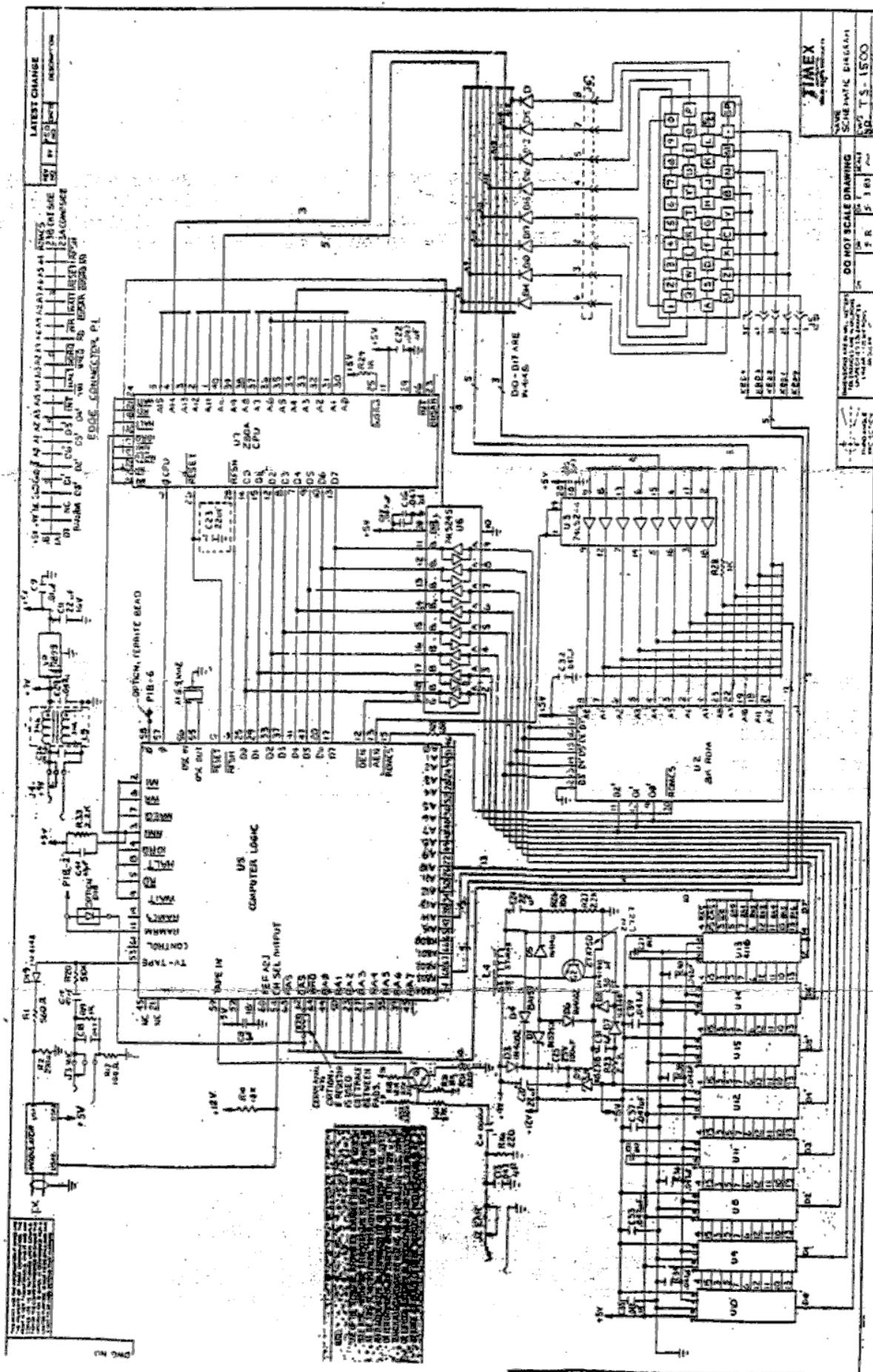
The Bulletin Boards and User Groups listings are produced in conjunction with BBS Press Service Inc., publishers of a variety of electronic magazines and features that are available to BBS systems world-

wide. The Bulletin Boards and User Groups listings are produced exclusively for publication in *Computer Shopper* and are the exclusive property of Ziff-Davis Publishing. Because the listings are actually entered online, all information is as complete and accurate as possible at the time it was submitted. However, due to publication lead times (up to 120 days) and the nature of BBSs and User Groups, some listings may no longer be valid by the time they see print.

*Computer Shopper* and BBS Press Service Inc. are not responsible for any errors published in these listings. For more information, or if you are having any problems entering your listing on our system, contact: BBS Press Service Inc., 8125 S.W. 21st St., Topeka, KS 66615; (913) 478-3157 (voice).

DECEMBER 1993 • COMPUTER SHOPPER 665







TS1000/ZX-81

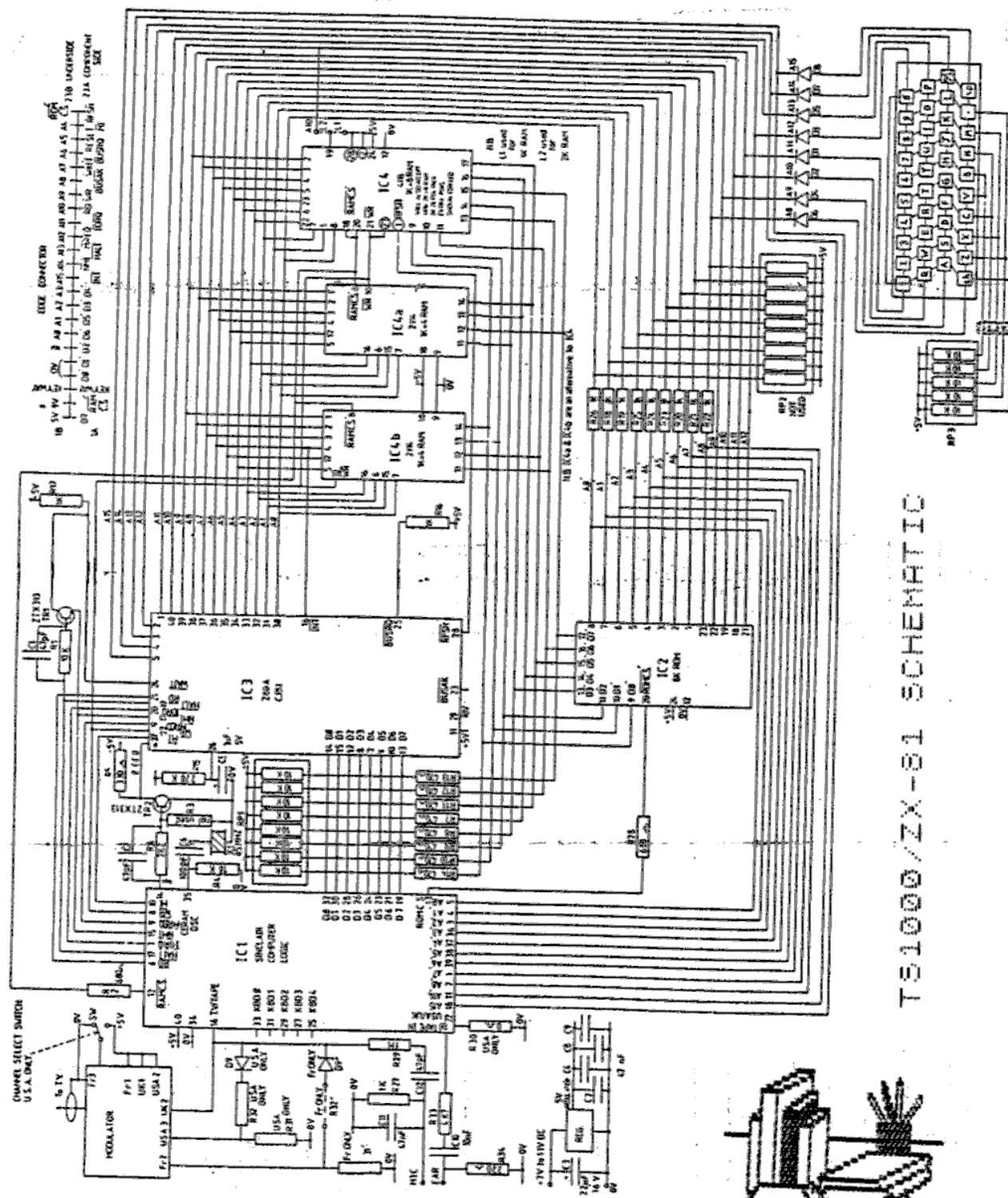
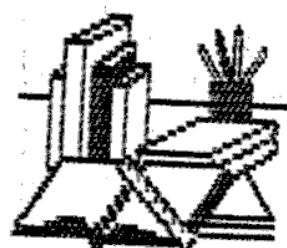
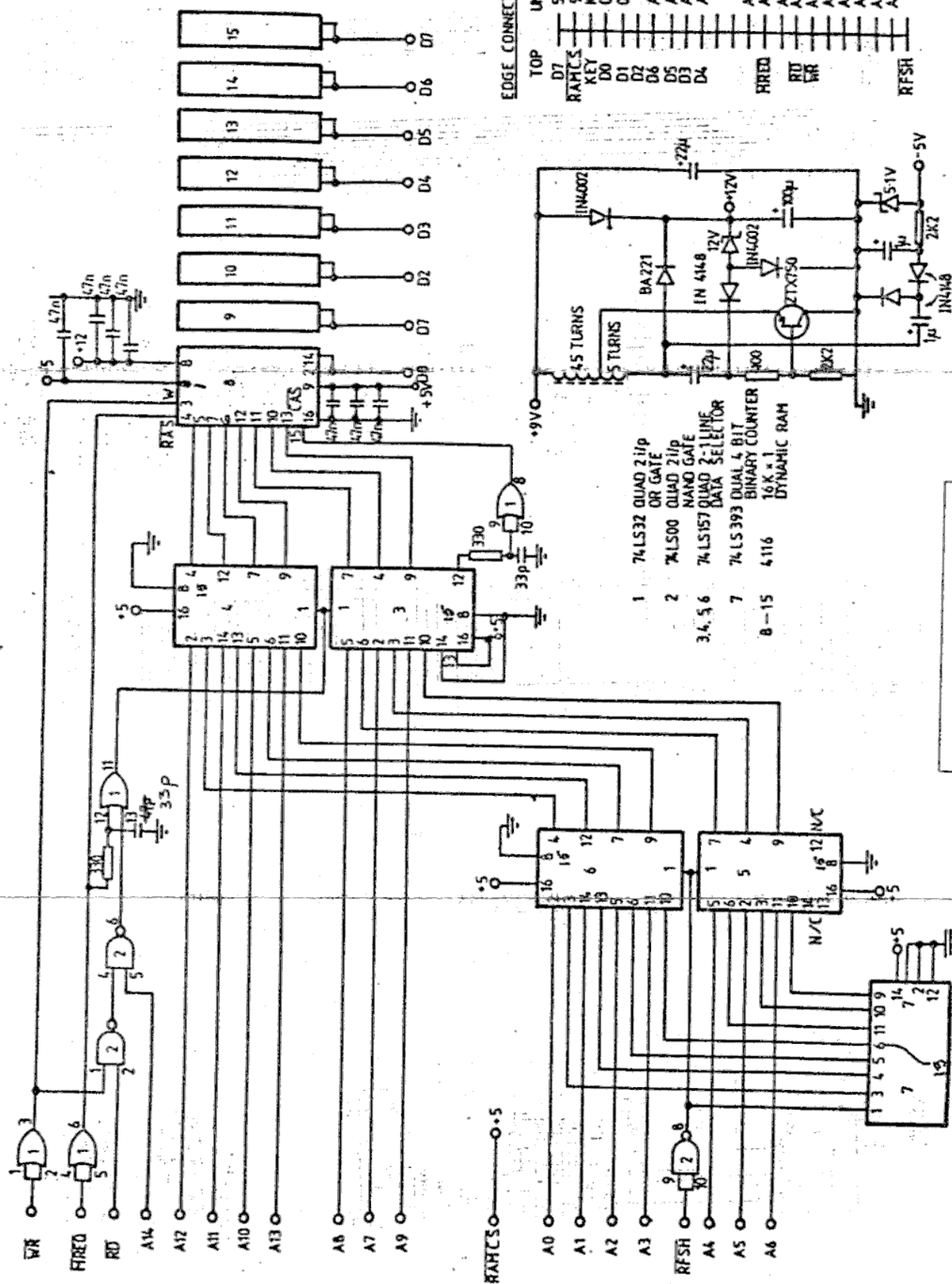


FIG 1

TS1000/ZX-81 SCHEMATIC



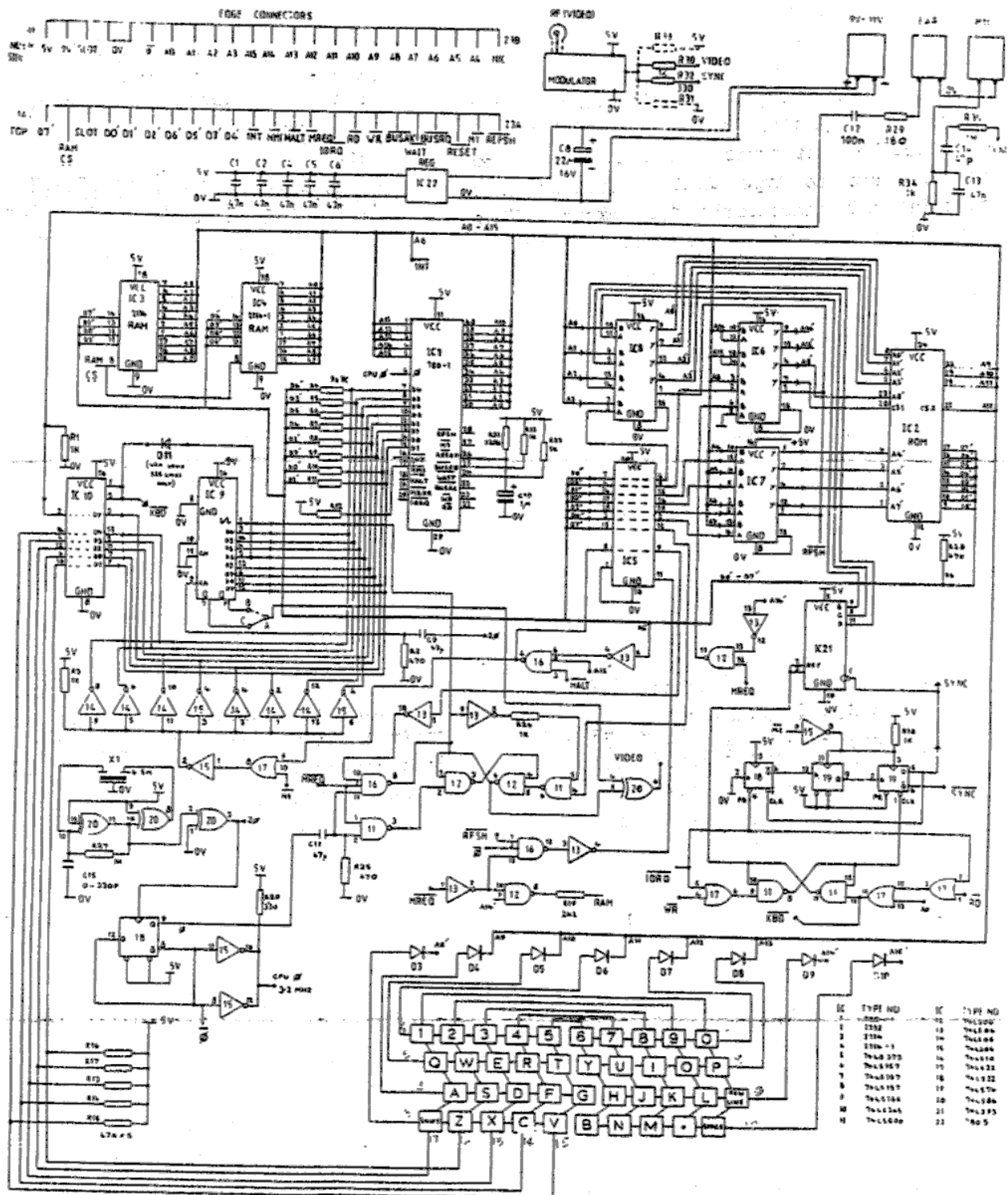
## Schematic for Sinclair 16K RAM Pack\_\_\_\_\_



Sinclair ZX 16K RAM Pack ©



# ZX80 Circuit Diagram



## ZX80 Technical Fact Sheet

### CPU

Type: Z80A (or NEC equivalent.)  
Speed: 3.25 MHz

### ROM

Type: 8332 (Mask programmed by Electronic Arrays)  
Size: 4K x 8  
Replacements:

Type	Size
2716	2K x 8
2732	4K x 8

### RAM

Type: 2114  
Size: 1K x 4  
Speed: 450ns

### POWER

Input: 9-11 Vdc @ 350-500 ma (Typ. 400ma)  
Regulator: 7805 (Internal, Heatsinked.)  
Filtered: Yes  
Dispersed: Yes

### MOUNTING

CPU, RAM and ROM are socketed. All other chips are soldered to board.

### PCB

Type: Double sided. Plated through.

### CASE

Size: 8 1/2" X 6 1/2" X 1 1/2"

### KEYBOARD

Type: 40 key touch-sensitive membrane.

### INPUT/OUTPUT

A.) 3.5 mm Power Jack  
B.) 3.5 mm Earphone Jack  
C.) 3.5 mm Microphone Jack  
D.) 40 pin polarized edge connector (accesses all Z80A lines)  
E.) R.F. Video output @ VHF channel 2

### CORDS

A.) 4' Video Cord  
B.) Split double 2 conductor cassette cord



**BANNER**  
For The TS 2068  
By Christopher Raynak

This is a short program to print long banners featuring large characters on the 2040 printer. Unlike some other banner programs, you do not have to type DATA statements that contain each character's dot makeup. This program looks directly into the ROM for the dot patterns. The 2068 stores each scan line of dots as a single decimal number. This is unlike the TS 1000 which its dot patterns as binary 1's and 0's. In the 2068 ROM they start at address 15359. This program works with all characters except inverse and user defined and regular graphics.

```

1 DIM B$(8,8)
2 PAPER 0: BORDER 0: INK 7: C
3 PRINT AT 10,4;"Banner by Ch
4 PAUSE 300
5 PAPER 1: BORDER 1: CLS
6 PRINT "When entering your m
 essages you must remember that y
 ou are limited to 32 characters
7 PRINT "Also, you cannot us
  e user def. graphics or regular
  graphics for banners." "Please
  select one of the letter sizes f
  rom below."
8 PAPER 2: PRINT "
9 PRINT "1) 3x3" "2) 16x16"
10 INPUT "Your selecti
  on:" B$
11 CLS
12 PRINT "Please enter your me
  ssage."
13 INPUT C$: IF LEN C$>32 THEN
  LET C$=C$(1 TO 32)
14 PAPER 3: PRINT AT 8,0;"Your
  message is being processed." P
  APER 1
15 FOR Z=1 TO LEN C$: PRINT AT
  10,Z-1;C$(Z): LET L=15359+(CODE
  C$(Z)*8)
16 REM *Finds address of first
  scan line.
17 REM *****
18 REM Converts decimal #
19 REM of the scan line of
20 REM corresponding character
21 REM in the ROM to binary.
22 REM *****
23 FOR X=1 TO 8
24 LET L=L+1: LET D=PEEK L
25 FOR A=1 TO 3
26 LET B$(X,A)=CHR$(CODE "0
  "-D+INT (D/2))
27 LET D=INT (D/2)
28 NEXT A
29 NEXT X
30 CLS
31 LET A$=""
32 REM *****
33 Rotates later 90
34 degrees to the right.
35 *****
36 FOR X=1 TO 8
37 FOR Y=8 TO 1 STEP -1
38 IF B$(Y,X)="1" THEN GO TO 4
39
40 IF 3=1 THEN LET A$=A$+" "
41 IF 3=2 THEN LET A$=A$+" "
42 IF 3=3 THEN LET A$=A$+" "
43
44 GO TO 490
45 IF 3=1 THEN LET A$=A$+" "
46 IF 3=2 THEN LET A$=A$+" "
47 IF 3=3 THEN LET A$=A$+" "
48
490 NEXT Y

```

```

491 FLASH 1: INK 0: PAPER 7: PR
INT AT 12,3;"**PRINTER IN OPERAT
ION**" FLASH 0
492 IF 3=1 THEN LPRINT A$
493 IF 3=2 THEN LPRINT A$
494 IF 3=3 THEN LPRINT A$
501 INK 7: PAPER 1: PRINT AT 12
3;"
502 LET A$=""
510 NEXT X
520 NEXT Z
530 PRINT AT 13,0;"Would you li
  ke to print another message?": I
  NPUT A$: IF A$(1)="N" OR A$(1)="
  n" THEN GO TO 1000
540 INPUT "Same letter size?": A
$: IF A$(1)="N" OR A$(1)="n" THE
  N CLS: GO TO 8
550 CLS: GO TO 10
1000 REM *****
1010 REM Memory Used=2040 bytes*
1020 REM *****

```

**BANNER 1000**  
By John Marion

The purpose of this program is to print out banners on your Timex printer using your ZX81 or T/S 1000. After typing in and running, you will be instructed to "ENTER YOUR MESSAGE TO PRINT". Now enter your message and press return. Next you will be asked to choose a "bit character". This is the character which makes up the letters on your banner. After entering your choice of bit, your banner will begin to print out. Choice 3 will use the same letter for a bit as the letter it is currently printing. After your banner is finished, the program will run again.

```

100 REM BANNER 1000
110 CLS
120 PRINT AT 4,7;"***BANNER 100
  0***"
130 PRINT AT 10,2;"ENTER YOUR M
  ESSAGE TO PRINT"
140 INPUT A$
150 IF A$="" THEN GOTO 140
160 DIM B$(32)
170 DIM X(8,8)
180 REM CHOOSE BIT
190 CLS
215 PRINT AT 4,7;"***BANNER 100
  0***"
220 PRINT AT 8,6;"CHOOSE BIT CH
  ARACTER"
230 PRINT AT 10,6;"(1) "
240 PRINT AT 12,6;"(2) "
250 PRINT AT 14,6;"(3) SAME AS
  LETTER"
260 INPUT A
270 IF A<1 OR A>3 THEN GOTO 260
280 REM PRINT BANNER
290 CLS
300 FOR D=1 TO LEN A$
310 IF CODE A$(D)>128 THEN LET
  A$(D)=" "
320 FOR Y=1 TO 8
330 LET X(Y,1)=PEEK (Y-1+7580+(

```

```

8=CODE A$(D)))
400 NEXT Y
410 FOR Y=1 TO 8
420 LET E=X(Y,1)
430 LET X(Y,3)=(E>=128)
440 IF E>=128 THEN LET E=E-128
450 LET X(Y,7)=(E>=64)
460 IF E>=64 THEN LET E=E-64
470 LET X(Y,6)=(E>=32)
480 IF E>=32 THEN LET E=E-32
490 LET X(Y,5)=(E>=16)
500 IF E>=16 THEN LET E=E-16
510 LET X(Y,4)=(E>=8)
520 IF E>=8 THEN LET E=E-8
530 LET X(Y,3)=(E>=4)
540 IF E>=4 THEN LET E=E-4
550 LET X(Y,2)=(E>=2)
560 IF E>=2 THEN LET E=E-2
570 LET X(Y,1)=(E>=1)
580 NEXT Y
600 FOR F=24 TO 1 STEP -1
610 FOR I=8 TO 1 STEP -1
615 IF X(I,F/3)=0 THEN LET E$="
620 IF X(I,F/3)=1 THEN LET E$=(
" " AND A=1)+(" " AND A=2)+(A$(D
) AND A=3)
630 LPRINT E$;E$;E$;E$;
640 NEXT I
650 LPRINT
655 IF F<3 THEN GOTO 665
660 NEXT F
665 IF D<1 THEN GOTO 680
670 NEXT D
680 RUN

```

#### More One-Liners for the 2068

The "2068 Spirograph" routine drew a good bit of response including a letter from Robert Hartung, former writer for SYNC magazine. He informs us that the routine is a variation of one which is at the top of page 472 of Morse, Adamson, Anrep, and Hancock's Essential Guide To T/S Home Computers. Another variation is this one Robert made up for SYNC the month Ziff Davis pulled the plug.

```

1 LET P=INT (AND*8): LET I=IN
T (AND*8): IF P=1 THEN RUN
2 CLS: PLOT 65,27: ON ERR GO
TO 2: INK 1: PAPER 0: BORDER IN
T (AND*8): BRIGHT INT (AND*2): D
RAW OVER 1,120,120,INT (AND*300)
*PI: PAUSE 80: IF INKEY$="0" THE
N ON ERR RESET: STOP
3 RUN
4 SAVE "draw" LINE 1
5 REM - Keying "0" during the
PAUSE 80 of line 2 permits stop-
ping the routine. Otherwise the
ON ERR instruction will ignore
"STOP" and "BREAK".

```

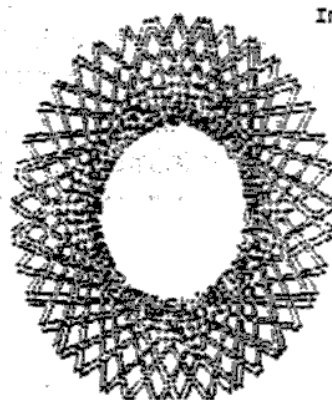
The following short programs were borrowed from the Sinclair Timex User Groups Newsletter of the Boston Computer Society (Volume 3, issue 4). As you can see some pretty neat effects can be achieved using only one program line with the 2068.

```

10 INPUT "type a number, 0 to
50 "X: INPUT "how many repeats
? "Y: FOR N=1 TO Y: PLOT 65,27
: DRAW OVER 1,120,120,(X+10*PI)*3
*PI: NEXT N

```

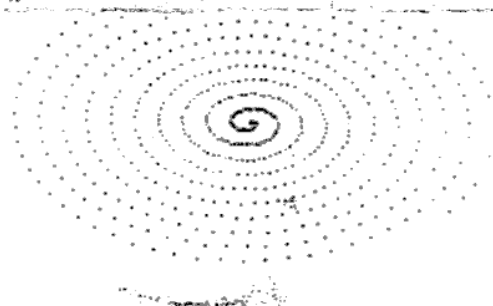
Input 5,5



```

10 FOR X=0 TO 65 STEP .1: PLOT
2*X+SIN X+125,X+COS X+85: NEXT
X

```



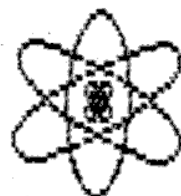
```

10 FOR X=0 TO 254: PLOT X,40*5
IN (X/10)+85: DRAW 10,10: DRAW -
10,5: NEXT X

```



TSH



$E=mc^2$